

# Pronouns in three French-speaking Children with SLI: Evidence for Deviant Language Development

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## ABSTRACT

Les productions de pronoms démonstratifs et personnels chez trois enfants dysphasiques francophones âgés de 3 à 6 ans (MLU=1.4-4.08) ont été étudiées dans le cadre d'une étude longitudinale de cas. Pour chaque enfant, trois à quatre enregistrements (10-20min) ont été réalisés à des intervalles de 6 à 12 mois. Les analyses quantitatives et qualitatives des productions, omissions et erreurs révèlent des différences entre enfant dysphasique et enfant typique sur essentiellement deux faits : les omissions de pronoms objets ainsi que les nombres et types d'erreurs. Ces résultats préliminaires suggèrent d'une part que les pronoms objets mais aussi les erreurs peuvent être des marqueurs cliniques de la dysphasie en français, d'autre part que le développement des pronoms est davantage déviant qu'en retard chez les trois enfants.

## 1. INTRODUCTION

Children with Specific Language Impairment (henceforth, SLI) are essentially described as presenting a language disorder in absence of any auditory, neurological or behavioural disorder. Their difficulties can be manifested in all language domains, but morphosyntax is probably the most vulnerable area. Not all aspects of morphosyntax are equally affected, but cross-linguistic studies have identified some common areas of difficulty and the production of pronouns is one of them [Leo00].

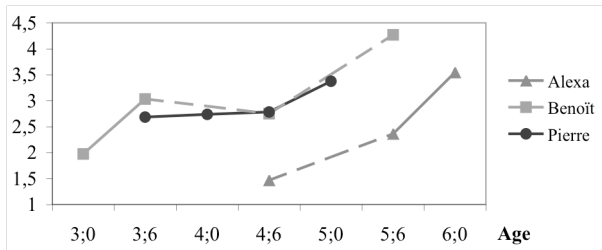
In French, the study of pronoun production by children with SLI has focused on two main aspects: 1) omissions and errors that French-speaking children with SLI (henceforth, FSLI children) make compared to typically developing (henceforth TD) children; 2) difficulties with object pronouns, argued to constitute a "genuine and persistent characteristic for French SLI" [Ham03], i.e. a potential clinical marker of FSLI. Most of the studies focused on some morphosyntactic features of pronouns such as case or function, leaving out other important ones such as person production. In addition, most studies consist of cross-sectional quantitative analyses conducted with groups of children, but little is known about how pronouns actually develop within these children, from a longitudinal and qualitative point of view.

The current study therefore aims at the description of the development of pronouns in three individual FSLI children, in order to make a contribution to previous studies on FSLI. Productions, omissions and misuses of pronouns in speech of three children with SLI are analyzed from a quantitative and a qualitative point of view, in order to understand the evolution of forms and functions of pronouns in their pronominal system.

Theoretically, this study enables the testing of accounts of SLI. First, the French pronominal system is constituted of both phonetically salient and non-salient elements, enabling to test the processing deficit account of SLI [Leo00]. Second, pronouns in French carry morphosyntactic features complex enough to evaluate the linguistic deficit accounts. Moreover, this longitudinal study of pronoun development at the level of individual children enables to test the delayed vs. deviant hypothesis of language development. Clinically, the assumption that pronouns are a clinical marker of French SLI justifies by itself the need to investigate their development in more children, to test whether impairment could be diagnosed, and whether other features of pronouns could facilitate the task as well. Looking at the individual child level from a longitudinal perspective is also crucial because this is the way speech therapists follow SLI when individual children of different ages are referred to them.

## 2. METHOD

**Participants.** Speech of three FSLI children (one girl; two boys) aged 3- to 6 was sampled at 6- to 12-month intervals by the second author. In the first session, their MLUs vary between 1,4 and 2,7, and evolve differently (figure 1). SLI was diagnosed if children had 1) no hearing impairment as checked by an audiometrical examination, 2) no difficulties in lexical and morphosyntactic comprehension checked on the N-EEL psycholinguistic evaluation [Che01], 3) an IQ above 90 (according to the WISC-III scale [Wec96]), and 4) no behavioural disorders. Their deficits follow a phonological-syntactical continuum at the production level. The three children come from a high sociocultural environment, and only the girl belongs to at risk familial language disorders.



**Figure 1:** MLU development of the three children with SLI across 3 to 4 sessions.

The control group selected for this study consists of 8 TD children aged 2;01 to 2;11. Their spontaneous speech was sampled in the same context as the children with SLI. Each child with SLI was matched on MLU to a TD child.

**Data collection.** Spontaneous speech of children with SLI and TD children was recorded during free-play sessions [Nor91]. The children were provided with a familiar set of toys and could freely play and interact either with the clinician or with their caregiver.

**Transcription.** Alexa and Pierre's data were fully transcribed orthographically and phonetically for the current study in the CHAT format [Mac00]. Benoît's data and the control data had already been completely transcribed for a different project. These transcriptions were checked for reliability and consistency of proto-morphemes or *syllable fillers* [Pet93] coding.

**Analyses.** All verbal utterances (non-finite verb forms included), NPs or PPs including a pronoun, and pronouns used in isolation were extracted. Self- and other-repetitions as well as potentially unanalyzed formulaic expressions were taken into account in the analysis because they may contain variations involving pronoun production.

Productions, omissions and errors on personal pronouns were analyzed according to their person features, their type (clitic or strong pronoun) and their case. Fillers were included in this analysis and were not counted as errors. Errors were identified based on linguistic and extra-linguistic contexts. Intonation, contexts and pitch contour analyses determined whether verbs without subjects corresponded to omissions of subjects or to imperatives. Since the context was immediately available to all participants and all toys were individually introduced to the child and his caregiver, omissions of arguments were assumed to be omissions of pronouns as in "vont chez le docteur" (go to the doctor) (Benoît 3;6) or "je veux cacher" (I want to hide) (Alexa 6;0). Subject and object arguments were coded as to whether they were omitted or realized as clitic or strong pronouns, NPs or combinations of these elements.

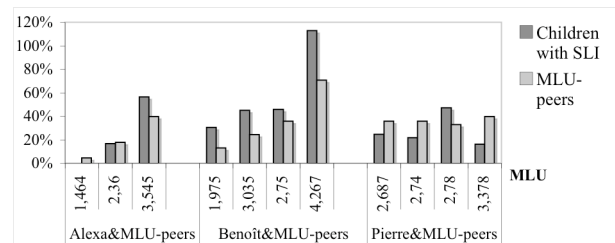
Forms, functions and contexts were investigated to provide both a quantitative and a qualitative analysis of pronoun uses.

### 3. ANALYSES

#### 3.1. Quantitative analysis

The present quantitative analyses originate in findings from the literature whose results (recapitulated in the title of each subsection) are tested here.

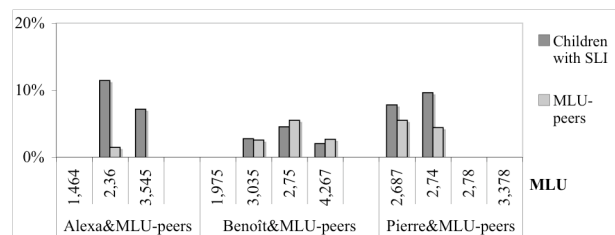
**Do FSLI children produce fewer (especially 3p) pronouns and make more omissions [Pla96]?** Compared to their MLU-peers, the three FSLI children produce as many or more pronouns than their MLU-peers, in high proportions from the smallest MLU and the earliest age (figure 2).



**Figure 2:** Percentage of pronouns produced per session out of the total number of utterances.

In addition, the three FSLI children omit less pronouns than the control group in 8 sessions out of 11. Among omitted pronouns, the 3p is often the most omitted, but it is also the most produced person.

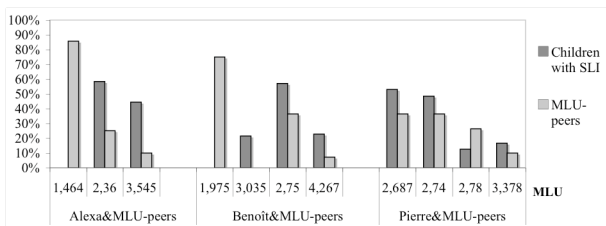
**Do FSLI children produce more errors, especially on (3p) accusative case pronouns and on (3p) clitics [Jak98]?** Although errors are rare (no more than 11% of productions), the three children with SLI tend to produce more than their MLU-peers, except in two of Benoît's sessions (figure 3).



**Figure 3:** Percentage of errors produced per session out of the total number of produced pronouns.

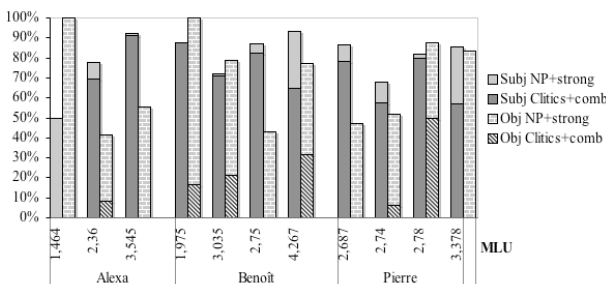
All these errors involve the production of clitic pronouns; all but one involve the 3p; and one error is made on an accusative case pronoun in object position.

**Do FSLI children omit object arguments more than TD children [Jak98, Ham03]?** When relevant contexts are produced by both children with SLI and their MLU-peers, the former tend to omit object pronouns more than the latter (figure 4). Pierre omits fewer object pronouns than his MLU-peer only once.



**Figure 4:** Percentage of object pronouns omitted per session out of the total number of relevant contexts.

**Do FSLI children avoid clitics and replace them with NPs or strong pronouns [Jak98]?** In subject position, FSLI children produce more clitics than NPs or strong pronouns in all sessions apart from Alexa's first session (figure 5). Whereas in object position, children with SLI produce more NPs or strong pronouns than clitics, but the same is true for their MLU-peers.



**Figure 5:** Percentage of clitics+combinations and NPs+strong pronouns produced per session out of the total number of relevant contexts for subject and object arguments.

### 3.2. Qualitative analysis

The number of errors produced is one of the main differences between TD and SLI children. Some comparable errors can be observed. For instance, all children can use a strong pronoun alone in subject position. Yet, differences can also be pointed among these *a priori* similar errors. In the current study, only children with SLI omitted clitics with a non-finite verb form: where Léa (2;10; MLU=3,1) says « moi est grande » (me is big), Alexa (6;0; MLU=3,5) says « parce que moi euh marcher » (because me mh walk) and Pierre (5;6; MLU=4,1) « toi le mettre ici » (you put it here).

Among gender errors, TD children always replace « elle » with « il » as in « sa maman i(l) dort » (his mother he sleeps) (Dorys, 2;4; MLU=2,7), but children with SLI can also replace « il » with « elle ». When « il » is used instead of « elle », the utterance is directly repaired as in « il attend [/] elle attend » (he's waiting [/] she's waiting) (Benoît 3;6; MLU=2,0). But uses of « elle » instead of « il » are not repaired, and in some cases it even seems that uses of « elle » are fixed: in Pierre's speech, this error occurs when the child is asking for something which should be here, but which is not (3;6; MLU=2,7). The same way he says « mais, elle est où cette télé là? » (but where is this TV?) with a bit of eagerness, he asks « elle est où lion? » (where is she lion?). It may be that the child uses the chunk « elle est

où X? » as a formulaic expression in particular situations.

TD and SLI children can also produce a demonstrative pronoun instead of a personal one, but for TD children, « c' » is used instead of « il/elle » as when Dorys (2;4, MLU=2,8) says « c'est bobo » (it is pain) meaning « il a bobo » (he has pain) as suggested by the observer's reformulation. By contrast, children with SLI can also use « c' » instead of « je ». At 4;6 (MLU=2,4), Benoît slightly hurts his finger. As he grumbles more than his father thinks it is worthwhile, the child explains that he is in a bad mood, using the demonstrative subject pronoun « c' » (1):

- (1) \*FAT: t'exagères ...                    *you're exaggerating...*  
 \*CHI: yyy.                                    *yyy.*  
 %com: cris de                                *screams of discontent*  
       mécontentement  
 \*CHI: **c'est grognon.**                    *it is grunchy.*  
 \*FAT: oui ben j'vois ça                    *well yes, I see you are*  
       que t'es grognon.                    *grunchy.*

This use of the demonstrative to talk about his feeling seems to precede the explosion of « moi je » (me I) and « toi tu » (you you) in the following session. Before that time, Benoît can only use « je » to describe the activity he performs or in formulaic expressions such as « je sais pas » (I don't know).

Despite a large amount of common types errors, peculiar ones could be observed in the speech of the children with SLI. In particular, they use many « on » (3p impersonal). This is especially true in the speech of Alexa. In (2) below, she is fully taking part in the action, and therefore seems to use « on » meaning her and her figurine:

- (2) \*CHI: **on** marche.                    *let's walk*  
 \*CHI: ouais **on** m(arche).            *yeah, let's walk.*  
 %act: fait marcher ses                *makes her figurines*  
       bonhommes.                        *walk*  
 \*CHI: allez **on** marche.                *come on, let's walk*

This « on » probably echoes « on » that the child may hear in her input. Yet, some uses of « on » seem to be also extended to « il ». In (3) below, Alexa finds the dog among her figurines and asks about it to the observer:

- (3) \*CHI: qui c'est ça?                    *who's that?*  
 \*OBS: ça c'est le petit                *this is the small dog*  
       chien  
 \*CHI: **on** dort où?                    *one sleeps where?*  
 \*OBS: ben par terre peut-            *well, on the floor*  
       être?                                *perhaps?*  
 \*OBS: ou y a pas une niche            *or isn't there a*  
       dans la maison?                    *kennel in the house?*  
 \*CHI: non.                                *no*

This example differs from the previous one, because she is not performing the action herself but asking about the dog's reality: where it sleeps. Such uses of « on » instead of « il » seem to occur especially when Alexa is talking about the dog. It could therefore be that Alexa mainly uses « il » for human figurines.

#### 4. DISCUSSION

The main aim of this study was to document the development of pronouns in three FSLI children, in order to evaluate results from previous studies on FSLI. The particularity of this study was to focus on individual children. The results showed that the three FSLI children differ from their MLU-peers on two main aspects: first, they omit more object pronouns; second, although errors are produced in small proportions, they are more numerous in FSLI children, and occur in peculiar contexts which seem to reflect transitions towards adult uses.

No one single account for SLI seems to fit with the results. On the one hand, pronouns were produced in high proportions and were mostly used correctly, which contradicts the linguistic deficit hypothesis. On the other hand, clitics were more produced than NPs or strong pronouns, which also contradicts the processing deficit account of SLI. Nevertheless, the latter account is modulated by a language-dependent hypothesis, which could explain our results: in languages in which pronouns are obligatory, children with SLI would rather produce them but make some substitutions [Leo00]. This is in agreement with what was observed in the data.

This study supports the hypothesis that object pronouns can be a clinical marker of FSLI, because object pronouns were more omitted in the speech of children with SLI than in the speech of their MLU-peers. This implies that such analyses can be reliable at the individual child level too. In addition, it showed that errors may serve as an additional support. The longitudinal design of this study suggests that these are reliable aspects across several ages.

In spite of some methodological limitations concerning the one-to-one matching of TD and SLI children, the data from the three FSLI children tend to support the deviant hypothesis of language development. In particular, the observation of individual differences, these peculiar pronominal uses that children with SLI make is the basis for this hypothesis. This is consistent with some studies of pronoun production in SLI [Ham03, Cip98] but in contradiction with others [Bol09, Moo01]. It seems that these conflicting views are not due to what children with SLI actually produce, but to the analyses performed. In fact, those studies which were in favour for a deviant development of pronouns in children with SLI also investigated productions qualitatively, by looking at specific contexts of production.

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